

THE DRAGON IS ALIVE

B61 Life Extension Program Advances

More than a half-century after its creation, the nation's oldest nuclear warhead is one step closer to a new life.

One of the many weapons that can be carried by the B-52—and some fighter jets—is the nuclear-armed B61 gravity bomb, which can be dropped at high speeds from as low as 50 feet. The warhead can be dropped free-fall or deployed (and slowed down) with a parachute. The B61 can be detonated in the air or on the ground.

Los Alamos designed and engineered the B61 in 1963. Most B61s were produced in the 1970s, and production ended about 20 years later. The B61, which initially had a life expectancy of 10 years, is the oldest type of nuclear weapon in the stockpile. Over the years it has been modified many times to meet changing military requirements.

Currently, the B61 is undergoing a life extension program (LEP) at Los Alamos (in partnership with other organizations in the weapons complex) to convert four earlier versions of the warhead (models B61-3, -4, -7, and -10) into a single modification: the B61-12. The LEP will ensure that the weapon remains safe, secure, and reliable by refurbishing key components through a combination of reuse, redesign, and remanufacturing. The LEP will also add a tail kit that will improve the B61's accuracy.

On August 1, the National Nuclear Security Administration (NNSA) announced that it authorized the production-engineering phase of the B61-12 LEP. This achievement—marking the final phase before production—comes after four years of work in the development-engineering phase of the program. The first production unit of the B61-12 is planned for 2020, followed by full-scale production.

“Reaching this next phase of the B61-12 LEP is a major achievement for NNSA and the exceptionally talented scientists and engineers whose work underpins this vital national security mission,” says NNSA Administrator Lt. Gen. Frank G. Klotz. “Currently, the B61 contains the oldest components in the U.S. arsenal. This LEP will add at least an additional 20 years to the life of the system.”

Which means that the B61-12 will remain a crucial part of the stockpile until 2040—and likely far beyond.

“These are major milestones for the program,” says Patti Buntain, B61 Life Extension Program Manager at Los Alamos, “and I would like to thank the Laboratory’s B61 team for making it a success. We have been working for the last four years to ensure that we deliver a safe, reliable product to the U.S. Air Force.” ✦



The B61 LEP refurbishes both nuclear and non-nuclear components to extend the bomb's service life while ensuring it remains safe, secure, and reliable.
(Photo: Sandia National Laboratories)